

Bright Fields Groundwater, Inc.

1806 NE 199th Street
Portland, Oregon 97229
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Memorandum

RE: Crawford Street Preliminary Assessment Sampling

To: Ross Rieke - Bridgewater Group, Inc.
Copy: Mat Cusma - SIC
From: Dennis Dykes - Bright Fields Groundwater, Inc.
Date: July 12, 2001

The temporary small diameter monitoring wells installed at the Crawford Street site were resampled on June 20, 2001. Three groundwater samples were collected, one from each of the temporary wells. The sample locations, sample identifiers, and field parameters are summarized on the attached table.

The monitoring wells were purged and sampled using a peristaltic pump and the tubing dedicated to each well. The depth to water each well was measured immediately before purging. A modified low flow purging method was used. This method included measurement of field parameters (pH, specific conductance, and temperature) after removal each quart of water (approximately one pore volume) and observation of the clarity of the water. Purging continued until the field parameters had stabilized and the water appeared to be clear. Four quarts of water were removed from each well. One 1-liter amber bottle was filled from the tubing at each well.

Each sample was placed in a cooler immediately after collection. Samples were delivered to North Creek Analytical, Inc. in Beaverton, Oregon under chain of custody documentation the day of sampling. The laboratory was instructed to analyze the sample from well PP-3 for PAHs and to hold the samples from wells PP-1 and PP-2.

Dedicated sampling equipment was used therefore decontamination was not necessary. The well probe and field meter were rinsed with distilled water after use at each well. The field meter was calibrated before use.

Attachments: Sampling Summary
Field Sampling Data Sheets
Chain of Custody Document

USEPA SF



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**Crawford Street Preliminary Assessment
Sampling Summary for
June 20, 2001**

Site Location	Sample Identifier	Depth to Water (feet)	Gallons Removed	Pore Volumes Purged
PP-1	W3-062001	27.81	1.0	4
PP-2	W2-062001	30.53	1.0	4
PP-3	W1-062001	29.18	1.0	4
Notes:				

Field Sampling Data

Project Location: Crowford St
 Sampling Event: June 20, 2001

Sample Location: PP-1
 Sample Field Identifier: W3-062001

Sampler: DR Dykes

Start Date/Time: 6/20/01 1130
 Weather: Sunny Hot

Well Evacuation Data

	Measurement	Date	Time	Method
Depth to Bottom:	=			
Depth to Water:	<u>30-219</u> = <u>27.81</u>	<u>6/20/0</u>	<u>11:40</u>	<u>well probe</u>
Water Depth:				
Well Diameter:				(gallons/ft: 2"=0.163g, 4"=0.653g)
Pore Volume Size:	<u>Water Depth</u> <u>gal/ft</u>			
	<u>Number</u> <u>Gallons</u>			<u>low flow</u>
Pore Volumes Removed:				

Field Water Quality Measurements

Pore Volume Number	pH	Specific Conductance (uS/cm at 25° C)	Temperature (°C)	Dissolved Oxygen (mg/l)	
<u>1 ft</u>	<u>6.76</u>	<u>1001</u>	<u>17.0</u>		
<u>2 ft</u>	<u>6.82</u>	<u>1001</u>	<u>15.5</u>		
<u>3 ft</u>	<u>6.85</u>	<u>1016</u>	<u>15.0</u>		
<u>4 ft</u>	<u>6.81</u>	<u>1004</u>	<u>15.5</u>		
<u>5 ft</u>					

Sampling

Date/Time	Containers (number/volume/type/preservative)	Depth Taken (ft)	Field Filtration	Sampling Method
<u>6/20 1300</u>	<u>1 100ml amber glass none</u>	<u>~28'</u>	<u>NO</u>	<u>Peristaltic pump</u>
				<u>dedicated tubing</u>

Equipment Decontamination: None

Sample Appearance: Clear

Sample Handling: Code deliver to lab same day

Comments: Bubbles in tubing while pumping due to new max suction lift
Gray silty first 6 quarts

Field Sampling Data

Project Location: Crawford St
 Sampling Event: June 20, 2001

Sample Location: AP-2
 Sample Field Identifier: W2-062001

Sampler: D.R. Dykes

Start Date/Time: 6/20/01 10:45
 Weather: Sunny, warm

Well Evacuation Data

	Measurement	Date	Time	Method
Depth to Bottom:	=			
Depth to Water:	30 ± 0.53 = 30.53	6/20/01	10:50	well face
Water Depth:				
Well Diameter:				(gallons/ft: 2"=0.163g, 4"=0.653g)
Pore Volume Size:	Water Depth Number x Gallons			(low flow)
Pore Volumes Removed:				

Field Water Quality Measurements

Pore Volume Number	pH	Specific Conductance (uS/cm at 25° C)	Temperature (°C)	Dissolved Oxygen (mg/l)	
1 ft	6.53	706 706	14.0		
22 ft	6.58	697	13.5		
33 ft	6.62	689	13.5		
44 ft	6.62	683	13.5		

Sampling

Date/Time	Containers (number/volume/type/preservative)	Depth Taken (ft)	Field Filtration	Sampling Method
6/20 11:00	1 1000 mL glass None	~ 38'	no	push 1 ft through dedicated tubing

Equipment Decontamination: none

Sample Appearance: Clear

Sample Handling: Cooler deliver to lab same day

Comments: Bubbles in tubing while pumping due to vent near 1st slightly silty last quart of pump

Field Sampling Data

Project Location: Crawford St
 Sampling Event: June 20, 2001

Sample Location: PP-3
 Sample Field Identifier: WI-062001

Sampler: DR Dykes

Start Date/Time: 6/20/01 945
 Weather: Sunny warm

Well Evacuation Data

	Measurement	Date	Time	Method
Depth to Bottom:	=			
Depth to Water:	<u>30-0.82 = 29.18</u>	<u>6/20/01</u>	<u>1005</u>	<u>well probe</u>
Water Depth:				
Well Diameter:				(gallons/ft: 2"=0.163g, 4"=0.653g)
Pore Volume Size:	<u>Water Depth</u> <u>gal/ft</u> x <u>Number</u> <u>Gallons</u>			<u>NA Low flow</u>
Pore Volumes Removed:				

Field Water Quality Measurements

Pore Volume Number	pH	Specific Conductance (uS/cm at 25°C)	Temperature (°C)	Dissolved Oxygen (mg/l)	
<u>1 ft</u>	<u>6.60</u>	<u>862</u>	<u>14.0</u>		
<u>2 ft</u>	<u>6.74</u>	<u>847</u>	<u>13.0</u>		
<u>3 ft</u>	<u>6.72</u>	<u>838</u>	<u>13.0</u>		
<u>4 ft</u>	<u>6.72</u>	<u>831</u>	<u>12.0</u>		

Sampling

Date/Time	Containers (number/volume/type/preservative)	Depth Taken (ft)	Field Filtration	Sampling Method
<u>6/20 10:15</u>	<u>1 1000 Amber glass None</u>	<u>~38'</u>	<u>no</u>	<u>peristaltic pump</u>
				<u>dedicated tubing</u>
				<u>to bag</u>

Equipment Decontamination: None

Sample Appearance: Clear

Sample Handling: Cooler, deliver to lab same day

Comments: Bubbles in tubing while pumping due to near max suction lift
Silly first gallon of purging, brown.

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <u>Bridgewater Group</u>		INVOICE TO: <u>Ross Riecke</u> <u>Bridgewater Group</u>										TURNAROUND REQUEST in Business Days* <div style="display: flex; justify-content: space-around; font-size: small;"> Organic & Inorganic Analyses Petroleum Hydrocarbon Analyses </div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <input checked="" type="checkbox"/> 10 STD. </div> <div style="text-align: center;"> <input type="checkbox"/> 7 STD. </div> <div style="text-align: center;"> <input type="checkbox"/> 5 STD. </div> <div style="text-align: center;"> <input type="checkbox"/> 4 STD. </div> <div style="text-align: center;"> <input type="checkbox"/> 3 STD. </div> <div style="text-align: center;"> <input type="checkbox"/> 2 STD. </div> <div style="text-align: center;"> <input type="checkbox"/> 1 STD. </div> <div style="text-align: center;"> <input type="checkbox"/> <1 STD. </div> </div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-top: 5px;">OTHER</div> <div style="margin-left: 10px;">Please Specify _____</div> <div style="font-size: x-small; margin-top: 5px;">*Turnaround Requests less than standard may incur Rush Charges.</div>								
REPORT TO: <u>Ross Riecke</u>		P.O. NUMBER:																		
ADDRESS: <u>Bridgewater Group</u>																				
PHONE: <u>503 675 5252 ext 2</u> FAX:																				
PROJECT NAME: <u>Gowford Street</u>		REQUESTED ANALYSES																		
PROJECT NUMBER:																				
SAMPLED BY: <u>DADylces</u>																				
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	8270	SIM	HOLD	H	A											MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. <u>W1-062001</u>	<u>6/20/01 10:15</u>	X															<u>W</u>	<u>1</u>		
2. <u>W2-062001</u>	<u>" 11:00</u>			X													<u>W</u>	<u>1</u>		
3. <u>W3-062001</u>	<u>" 13:00</u>			X													<u>W</u>	<u>1</u>		
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				
13.																				
14.																				
15.																				

RELINQUISHED BY: <u>DADylces</u>	DATE: <u>6/20/01</u>	RECEIVED BY: <u>Sivan Passargy</u>	DATE: <u>6/20/01</u>
PRINT NAME: <u>Dennis R Dylces</u>	FIRM: <u>RFSC</u>	PRINT NAME: <u>Sivan Passargy</u>	FIRM: <u>NCA</u>
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
PRINT NAME:	FIRM:	PRINT NAME:	FIRM:
ADDITIONAL REM		TEMP	